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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/801,189
Filing Date: March 15, 2004
Appellant(s): NEWELL ET AL.

Mark D. Trenner
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/5/2010 appealing from the Office action mailed 1/6/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5715379	Pavlovic et al	10-1995
7092117	Kageyama et al	7-2001
2005/0102442	Ferlitsch	11-2003
2003/0227651	Mathieson	6-2002
2004/0184106	Ferlitsch	3-2003
6618167	Shah	12-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Objections

1. Claim 21 is objected to because of the following informalities:

- It is suggested to change the dependency of claim 21 to -- claim 20 -- instead of "claim 19" in order to give the phrase "said media" antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3, 5-8, 10, 14-18 and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "*to increase efficiency and adaptability of processing each batch*" in claims 1, 8 and 15 is a relative term which renders the claim indefinite. The term "*to increase efficiency and adaptability of processing each batch*" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. As stated in the above arguments, the scope of claim language cannot depend solely on the subjective opinions of individuals practicing the invention. In modern printing system design, the Examiner believes that about every invention is created with intent to have units and processes that are used to increase efficiency and adaptability to process print jobs. As is the case of Pavlovic applied below. How would one measure that the system in question increases the use of time in an effective manner and the adaptability of processing in the system? The dependent claims are also rejected because of their dependency on a rejected independent claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 8, 10, 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pavlovic '379 (USP 5715379).

Re claim 8: Pavlovic '379 discloses a method of processing a print batch in a print device, comprising:

storing on a memory storage device of a formatter a print batch that includes a plurality of print jobs (i.e. Pavlovic '379 discloses the spool (106) being used to store the print job's PDL, which can include the actual image data to be printed and the job description. The files used to produce an image can be considered as a job since these separate files in different formats correspond to the formation of an individual image per file. In the conventional system, the decomposed print jobs can be stored on the buffer of the decomposer until it is requested by other parts of the printing system. Used in the system of Pavlovic '379 is common image pools or spools that the buffer manager uses to store more information to free up the decomposer; see figs. 1-3, col. 2, line 46—col. 3, line 67 and col. 7, line 10 – col. 10, line 42);

evaluating by an imaging component characteristics of said print batch to independently determine a pick order to increase efficiency of picking media sheets (i.e. in the system, the system control evaluates, or interprets, the job description and determines the type of media picked, or chosen, for the image to be printed on. The Pavlovic reference is used to increase the efficiency of the system in a manner by

processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

picking by a print engine said media sheets according to said pick order (i.e. in accordance with the job description, the system control chooses the tray that contains the specified paper to be used in the feeding process for imaging. The function of picking from different types of sheets to be used for a print job is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ll. 4-55);

evaluating by the imaging component said characteristics to independently determine a transfer order of said print jobs to increase efficiency of transferring said print jobs from said formatter to an imaging component (i.e. in the system, the decomposition facility (110) is considered to be the formatter since it is used to format incoming PDL into a uncompressed bitmap. The system control evaluates the job description and determines which jobs from the buffer manager's spool or the common image pool is to be transferred to the printer hardware (114). This decision of transferring the jobs to the printer hardware is based on the stream handles and the job description that affects the stream handles. In the conventional system, the decomposer is used to store the data that is RIPed and then transfer that information to the image forming part of the printing system. The system evaluates the job description and the data stream of the job information and decides based on these characteristics what job data is output to the printing hardware. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they

were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42);

transferring said print jobs from said formatter to said imaging component based on said transfer order (i.e. In the conventional system, the decomposer is used to store the data that is RIPed and then transfer that information to the image forming part of the printing system. This performs the feature of transferring the jobs from the formatter to the imaging component in the printing system. In the overall invention, the jobs are transferred from the buffer manager's spool or the common image pool to the printer hardware based on the transfer order decided by the system control using the stream handle concept and the information from the job description. The system evaluates the job description and the data stream of the job information and decides based on these characteristics what job data is output to the printing hardware. Depending on the load conditions of the print job, the jobs are transferred to the marker in a different manner; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42);

forming images by said print engine corresponding to said print jobs on media sheets (i.e. the printer hardware is used to form images that correspond to the print jobs on the sheets designated by the job description; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

evaluating by the imaging component said characteristics to independently determine a delivery order of said media sheets to increase efficiency of delivering said media sheets (i.e. in the system, when the job description is evaluated, or interpreted,

by the system control, the order of delivery of the printed images from the printer to the finisher in the system is determined using the stream handling concept. Whichever stream handle is chosen first is the stream of data that is first printed and finished. However, the document finished is delivered to a certain tray based on the information gained from the job specification, which was evaluated by the system control (108). The tray selected for the output of the documents is considered as the output portion. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42); and

delivering by said print engine said media sheets to an output portion of said print device based on said delivery order (i.e. in the system, the sheets that are printed are then delivered to the part of the printing system that performs the collation or stapling of the printed sheets. The finished sheets are then forwarded to the delivery tray based on the information from the job specification or description; see figs. 1-3; col. 2, line 46 — col. 4, line 61, col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42).

Re claim 10: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 8, wherein said characteristics comprise an image receiving media type, an image size, an image processing time, or an image

forming time (i.e. the job description has the type of media that will receive the image; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ll. 4-55).

Re claim 14: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the method of claim 8, forming said images includes using said imaging component to convert data contained in said print job to commands (i.e. in the system, the marker, is used to take the PDL that makes up the image and the job specification and convert these components of the file into an instruction for the printer hardware; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

conveying said commands to a print engine, and forming said images in response to said commands (i.e. the marker (112) is used to send the instructions of the print file to the printer hardware in order for the printer hardware to accept the instructions and print the image that is described by the instructions; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 15: Pavlovic '379 discloses a print device, comprising:

a formatter configured to pool a batch of print data (i.e. in the conventional system, the decomposed print jobs can be stored on the buffer on the decomposer until it is requested by other parts of the printing system. Used in the system of Pavlovic '379 is common image pools or buffer managers that can store more information to free up

the decomposer; see figs. 1-3; col. 7, line 10 – col. 10, line 42), wherein said batch includes a plurality of print jobs (i.e. in the system, the files are considered as a print job since these involve forming at least one image per format. The system can provide for a plurality of files in the system; see figs. 1-3; col. 2, line 46 — col. 4, line 61);

a processor having an imaging component residing thereon (i.e. the system controller is used as the processor and the processor performs the feature of the imaging component, which is the evaluation or the interpretation of the job specification; see figs. 1-3; col. 2, line 46 — col. 4, line 61), wherein said imaging component is configured to access batch information about said batch, including print media type, image size, image processing time, or image forming time (i.e. the system control accesses the files in the spool (106) and checks the job specification that is related to each file. The job specification is used to help determine functions in relation to the files that are combined into one print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61, col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42) and

based on said batch information, to independently determine a pick order for different types of print media to be used for different print jobs in order to increase picking efficiency (i.e. based on the job description, the size or type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ll. 4-55),

independently determine a transfer order for transferring rasterized print job data to said imaging component in order to increase transfer efficiency (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets, the stream handles are called in reverse order. With the stapling function and the different data streams taken into account, the different print jobs are submitted to the printing device in a certain order. In the system, the common image pool is used to store decompressed bitmap images. These images can be given to the printing hardware directly from the common image pool in the order in which they are requested by the marker. Also, since the jobs can have different load conditions, the jobs can be transferred to the marker in different manners as well. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 5, ll. 9-col. 6, ll. 55 and col. 7, line 10 – col. 10, line 42), and

independently determine a delivery order of said print jobs in order to increase delivery efficiency (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer

hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108). The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42); and

such that the picking order, the transfer order, and the delivery order are each distinct from one another (i.e. since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42); and

a print engine configured to form images on a plurality of media corresponding to said print jobs (i.e. since the printer hardware is used to perform the feature of printing

the images on printing sheets in relation to the files in the system, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 16: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said formatter is configured to perform raster image processing (i.e. the decomposers or decomposition facility (110) is used to decompress data and convert data into a uncompressed bitmap, since the PDL information is converted into the bitmap information to be printed by the printer hardware; see figs. 1-3; col. 4, line 1 – col. 5, line 36).

Re claim 17: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said print engine comprises an inkjet print head (i.e. with the system able to perform printing using an ink-jet marking engine, it is understood that a ink-jet print head would be used with the ink-jet marking engine; see figs. 1-3; col. 4, line 1 – col. 5, line 36).

Re claim 18: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the print device of claim 15, wherein said print engine is configured to pick said media according to said pick order (i.e. in the system, the system

control is in the printer system and printer hardware is used to feed the print media from a certain tray when the printer hardware is instructed by the system control; see figs. 1-3; col. 2, line 46 — col. 4, line 61) and to deliver said media according to said delivery order (i.e. since the printer hardware is used to perform the feature of printing the images on printing sheets and to deliver these images to the finisher part of the printing system to provide finishing capability to the sheets, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 19: Pavlovic '379 discloses a printing system, comprising:

means for evaluating characteristics of a print batch (i.e. the system control (108) is used to evaluate, or interpret, the job description of the file, considered to be the characteristics, and use this information to determine properties of the file or files in the overall print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61); and

means for independently determining a pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ll. 4-55),

independently determining a transfer order (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer

manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets, the stream handles are called in reverse order. Also, since the jobs can have different load conditions, the jobs can be transferred to the marker in different manners as well, thus changing the transfer order; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42), and

independently determining a delivery order (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108); see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42),

based on said characteristics (i.e. these functions are all dependent on the job description and data stream content sent to the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67),

wherein the picking order, the transfer order, and the delivery order are either distinct from one another or the same as one another (i.e. since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42).

Re claim 20: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the system of claim 19, and further comprising means for picking media according to said pick order (i.e. once the sheet to use is determined from the system control, the printing system is notified of the tray to feed the paper to be used to feed the media in order to print on the sheet; see figs. 1-3; col. 2, line 46 — col. 4, line 61),

transferring print jobs of said print batch according to said transfer order (i.e. using the stream handles that are designated by the system control to the buffer manager (120), the system transfers the print files from the buffer or pool to the printer hardware for printing according to the order chosen by the system control though the buffer; see figs. 1-3; col. 7, line 10 – col. 10, line 42), and

delivering said media according to said delivery order (i.e. the sheets with the printed images are also delivered to the finishing part of the printing system in the same order as the printing files where sent to the printing hardware for printing; see figs. 1-3; col. 7, line 10 – col. 10, line 42).

Re claim 21: The teachings of Pavlovic '379 are disclosed above.

Pavlovic '379 discloses the system of claim 19, and further comprising means for forming an image on said media (i.e. since the printer hardware is used to perform the feature of printing the images on printing sheets in relation to the files in the system, the above feature is performed; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3, 5-7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic '379 in view of Kageyama '117 (USP 7092117).

Re claim 1: Pavlovic '379 discloses a method of processing a print batch in a print device, comprising:

storing on a memory storage device a plurality of print jobs contained in said print batch (i.e. Pavlovic '379 discloses the spool (106) being used to store the print job's PDL, which can include the actual image data to be printed and the job description. The files used to produce an image can be considered as a job since these separate files in different formats correspond to the formation of an individual image per file; see figs. 1-3; col. 2, line 46—col. 3, line 67);

evaluating by a processor residing on said print device said characteristics of said print jobs (i.e. the system control (108) is used to evaluate, or interpret, the job description of the file, considered to be the characteristics, and use this information to determine properties of the file or files in the overall print job; see figs. 1-3; col. 2, line 46 — col. 4, line 61 and col. 6, ll. 4-55); and

independently determining by the processor a pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ll. 4-55),

independently determining a transfer order (i.e. in the system, the different decomposers have different rates of decomposition depending on the complexity of the image data and other factors. However, the order of the print files being transferred to the printer hardware (114) is based on the stream handles assigned by the buffer manager (120). In the example listed in column 9, since the pages of the formats require stapling, the system determines to first transfer stream handle IV to the printer

hardware and to perform this transfer in reverse order to stream handle I. Because of the characteristic of stapling the sheets and the stream handles, the pages to be stapled are called in reverse order. Also, since the jobs can have different load conditions, the jobs can be transferred to the marker in different manners as well, thus changing the transfer order; see figs. 1-3; col. 7, line 10 – col. 10, line 42), and

independently determining a delivery order (i.e. since the files transferred to the printer hardware are in reverse order, the delivery of the respective files to be printed and finished by the printer hardware and the finisher are also in reverse order. In this case, the job in the last format, Postscript file 2, is printed and stapled first since the pages are stacked face-up and stapled in the correct order with the first job on top of the rest of the finished files. This process determines when the printed images are to be sent to the finisher part of the printing system. However, the output tray, considered as the output portion, is chosen only based on the evaluation of the job specification. Therefore, the independent determination of delivering sheets to a certain tray is performed by the system control (108); see figs. 1-3; col. 7, line 10 – col. 10, line 42)

based, at least in part, on said characteristics to increase efficiency and adaptability of processing each print batch (i.e. these functions are all dependent on the job description sent to the printing system. The Pavlovic reference is used to increase the efficiency of the system in a manner by processing multiple jobs as if they were all one job and increasing adaptability of the system by processing multiple format jobs as one job; see figs. 1-3; col. 2, line 46—col. 3, line 67),

such that the picking order, the transfer order, and the delivery order are each distinct from one another for a print engine configured to form images on a plurality of media corresponding to said print jobs(i.e. since the decision to pick a certain media sheet, transfer a job in different manners to the marker depending on the load conditions and to place a printed job on a certain output tray is based solely on the evaluation of the job description by the system control (108) and these determinations do not have any affect any of the above determinations, the pick, transfer and delivery order are all performed independently of one another; see figs. 1-3; col. 6, ll. 4-55 and col. 7, line 10 – col. 10, line 42); and

outputting said plurality of print jobs without having to reorder the print jobs within the print batch (i.e. if the system were to operate in a case of the system only containing two jobs, Postscript file 1 and Postscript file 2, these jobs could be placed in the buffer in the order in which they are to be received. Based on figure 3, one can determine that based on the way the files are placed on the buffer that the information in Postscript file 1 was decomposed before Postscript file 2 seeing as there is one postscript decomposer. Since the system working in this manner contains the buffer only containing two jobs, Postscript files 1 and 2, and file 1 is decomposed before file 2, then the jobs will be placed on the buffer in that same manner. In this case, there is no reordering of the jobs since the jobs are no longer generated in random order, but the second job is processed after the first job is processed; see fig. 3, col. 7, ll. 11 – col. 8, ll. 66).

However, Pavlovic '379 fails to specifically teach storing characteristics of a plurality of print jobs.

However, this is well known in the art as evidenced by Kageyama '117. Kageyama '117 discloses storing characteristics of a plurality of print jobs (i.e. the invention of Kageyama is similar to the function of Pavlovic since both inventions involve sending a print job over to a printer for printing (same field of endeavor). However, shown in figure 5 are job tickets, which have the characteristics of a certain job and these are stored with their respective job in the archive within the printer; see fig. 5; col. 5, line 7 – col. 6, line 5).

Therefore, in view of Kageyama '117, it would have been obvious to one of ordinary skill at the time the invention was made to have the method step of storing characteristics of a plurality of print jobs in order to store a job ticket in the archive for a document within a printer (as stated in Kageyama '117 col. 5, lines 7-65).

Re claim 3: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein said characteristics comprise an image receiving media type (i.e. the job description has the type of media that will receive the image; see figs. 1-3; col. 2, line 46 — col. 4, line 61), an image size, an image processing time, or an image forming time.

Re claim 5: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 4, wherein said processor comprises an imaging component (i.e. in the printing system, the printer hardware (114) is considered as the imaging component since it prints the image on the sheet; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 6: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, further comprising forming at least one image corresponding to each of said print jobs on an image receiving media (i.e. in the system, there is at least one image that corresponds to each format in the files that are being printed. These images are printed on a certain type of sheet that is described in the job description part of the files sent to the printer system; see figs. 1-3; col. 2, line 46 — col. 4, line 61).

Re claim 7: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 6, wherein said images are formed according to said delivery order (i.e. the images in the system are formed due to the order in which the stream handles are chosen by the system. The order of the images being formed is based on the order in which the stream handles are picked and the delivery of the print jobs to the printer hardware is the same as the delivery to the finisher; see figs. 1-3; col. 7, line 10 – col. 10, line 42).

Re Claim 22: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining transfer order is based on image complexity, image size, or data transfer time (i.e. in the system, the transfer order of the image data from the decomposer is based on the complexity of the image data; see col. 8, lines 29-53).

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic '379 in view of Ferlitsch '442 (US Pub No 2005/0102442).

Re Claim 23: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order (i.e. based on the job description, the size and type of paper to be used is picked by the printing system. The paper picked is from the paper trays used to feed print

media into the printing system; see figs. 1-3; col. 2, line 46—col. 3, line 67 and col. 6, ll. 4-55).

However, Pavlovic ‘379 fails to specifically teach wherein independently determining pick order is based on expected pick time.

However, this is well known in the art as evidenced by Ferlitsch ‘442. Ferlitsch ‘442 discloses wherein independently determining pick order is based on expected pick time (i.e. the system of Ferlitsch is similar to the invention of Pavlovic since it takes the image complexity into account when outputting an image (same field of endeavor). However, as disclosed in the system, the media sheets chosen for specific jobs are based on the time of day when a document is to be printed since this is the time when the media sheet is picked, based on the job's characteristics, and the print job is executed on the printing system; see paragraphs [0067]-[0077]).

Therefore, in view of Ferlitsch '442, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein independently determining pick order is based on expected pick time, incorporated in the device of Pavlovic ‘379, in order to have an administrative policy that is responsive to the document complexity (as stated in Ferlitsch ‘442 paragraph [0068]).

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic ‘379, as modified by the features of Kageyama '117, as applied to claim 1 above, and further in view of Mathieson ‘651 (US PUB 2003/0227651).

Re Claim 24: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining transfer order, and delivery order is based on size of the print job in terms of memory space required (i.e. in the system of Pavlovic, the rate of the decomposers is based on the amount of memory space the actual job contains. The smaller the memory space the complexity of the job encompasses, the faster the job is processed, but the larger the memory space is based on a more complex document, the slower the system can process the job or jobs; see col. 8, lines 29-53).

However, Pavlovic '379 fails to specifically teach determining pick order is based on size of the print job in terms of memory space required.

However, this is well known in the art as evidenced by Mathieson '651. Mathieson '651 discloses determining pick order is based on size of the print job in terms of memory space required (i.e. Like the Pavlovic reference, the Mathieson reference involves network printing and takes into account the memory load on the system to determine where and when to output information (same field of endeavor). However, the Mathieson '651 reference discloses the feature of changing the order of jobs being processed in the print job queue based on the memory space required for the job of a certain size to be processed. The reference selects a certain job to process based on the amount of space required in the printer memory to process the job. If there is not enough space in the queue required to process the job, the system may re-route another job to another storage location. The printer can then select the job

originally presented to the system with a certain size that is now able to be stored in the print queue since the job size space required in order to perform the job is now available; See ¶ [0032]-[0037]).

Therefore, in view of Mathieson ‘651, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of determining pick order is based on size of the print job in terms of memory space required, incorporated in the device of Pavlovic ‘379, in order to manage jobs in an efficient manner that are competing for the same memory resources (as stated in Mathieson ‘651 ¶ [0001]-[0003]).

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic ‘379, as modified by the features of Kageyama '117, as applied to claim 1 above, and further in view of Ferlitsch ‘106 (US PUB 2004/0184106).

Re Claim 25: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic '379 discloses the method of claim 1, wherein independently determining pick order, transfer order, and delivery order is based on color scheme (i.e. in the system, the system determines the pick order based on the color scheme of the paper used for the printing process; see col. 6, ll. 4-40).

However, Pavlovic ‘379 fails to specifically teach wherein independently determining transfer order, and delivery order is based on color scheme.

However, this is well known in the art as evidenced by Ferlitsch '106. Ferlitsch '106 discloses wherein independently determining transfer order, and delivery order is based on color scheme (i.e. Like the Pavlovic reference, Ferlitsch '106 discloses converting a PDL into a raster image and outputting a print job (same field of endeavor). However, in the Ferlitsch reference, the system discloses transferring jobs based on the color scheme of the page to a Hybrid driver and to a color or black and white printer. The color scheme of the pages will determine which pages will be transferred to a certain printer (i.e. color or B/W) and in what order these pages will be transferred to the certain printer. The system of Ferlitsch '106 also discloses the order of delivering pages to an output portion of the output devices. When a mixed job is output, the system may determine that the color pages need to be delivered to the black and white printer after these pages are output. However, if the job is simply a color print, the job specification describing the finishing portion may have a color print output in a certain tray of the color printer. In both cases, depending on the color scheme of the job, a different order is devised for how the jobs are delivered to the output portion of the output devices; See ¶ [0018]-[0027], [0030]-[0052] and [0054]-[0071]).

Therefore, in view of Ferlitsch '106, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of wherein independently determining transfer order, and delivery order is based on color scheme, incorporated in the device of Pavlovic '379, in order to process pages based on the sheets being color or black and white (as stated in Ferlitsch '106 ¶ [0002]).

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pavlovic ‘379, as modified by the features of Kageyama '117, as applied to claim 1 above, and further in view of Shah ‘167 (USP 6618167).

Re Claim 26: The teachings of Pavlovic '379 in view of Kageyama '117 are disclosed above.

Pavlovic ‘379 discloses the method of claim 1, wherein independently determining pick order, transfer order, and delivery order is based on image complexity of the print jobs in the print batch (i.e. in the system, the determined orders of the image data is based on the complexity of the image data since the formats and specific pages are taken into consideration when outputting the document; see col. 8, lines 29-53).

However, Pavlovic ‘379 fails to specifically teach wherein independently determining pick order is based on image complexity of the print jobs in the print batch.

However, this is well known in the art as evidenced by Shah ‘167. Shah ‘167 discloses wherein independently determining pick order is based on image complexity of the print jobs in the print batch (i.e. the Shah ‘167 reference, like the Pavlovic reference, involves network printing and rasterizing data when it is received at the printer (same field of endeavor). However, the Shah reference discloses a printer that looks at print jobs and organizes in a simple queue and a complex queue. The printer then picks or selects the jobs in the simple queue to perform printing on these jobs first. With using the complexity of a document, the printer picks a certain job to complete and orders the jobs in the queue in the manner that they will be output; see col. 3, ll. 24-58).

Therefore, in view of Shah '167, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wherein independently determining pick order is based on image complexity of the print jobs in the print batch, incorporated in the device of Pavlovic '379, in order to have a printer look at the complexity of a job and pick certain jobs to output in a certain order (as stated in Shah '167 at col. 3, ll. 46-58).

(10) Response to Argument

Before immediately addressing the assertions raised in the Appeal Brief, the Examiner would like to point out one observation about the claim language. When viewing the appellant's claims, the language recites independently determining three respective orders, the picking order, transfer order and delivery order. However, because of the broad nature of the claims, the Examiner would like to pose the question of what exactly are the three determinations independent from and where is this specifically recited in the claims? The actual process or step the actual orders are independent from is not clearly articulated in the claim language. The Examiner interpreted these order determinations to be independent from one another. In other words, the system does not require the picking order determination result to determine the transfer order. In the case of Pavlovic, the system does not require knowledge about the sheets of paper used in order figure out the transfer order of jobs in low or heavy load conditions, which will be explained later[1].

[1] See Pavlovic '379 at col. 6, ll. 4-55 and col. 10, ll. 2-42.

Moreover, the Appellant's job characteristics are described in a separate group of data from the rasterized Postscript or Tiff job information[2]. In other words, the rasterization process produces the actual rasterized representation of the individual job as well as characteristic data corresponding to each job. The cited passage implies each job rasterized has its own data pertaining to the job characteristics, which is separate or different from the rasterized image data. This is similar to the Pavlovic since each job has a description of the job separate from the PDL that is to be rasterized for the system to evaluate[3]. After addressing these preliminary issues, the Examiner would like to address some of the Appellant's concerns below.

In response to Appellant's remarks on page 10 that column 9, ll. 20-51 show an example of the transfer order and delivery order being the same or dependent on one another, the Examiner respectfully disagrees with this interpretation. The Examiner interpreted the delivery process as having a certain job output to a specified tray[4] and the transfer process as the transfer of jobs to the buffer manager's storage devices, such as the common image pool or the spooler, and eventually to the marker. Column 9, ll. 20-51 is not relevant to the aspect of determining what output tray a job is delivered to, but is relevant to the manner in which the marker device chooses stream handles to print. This cited section was included for the Appellant to understand the background of Pavlovic transferring images to the marker from the decomposition software through the stream handling concept when the stapling function is desired by the user. Also, in the

[2] See Appellant's specification at ¶ [0016] and [0027]-[0029].
[3] See Pavlovic '379 at col. 3, ll. 15-col.4, ll. 17.
[4] Id. at col. 6, ll. 4-55.

mentioned cited section within the Office Action, which included most of column 7 to column 10, ll. 42, the system presents in column 8, ll. 29-37 the possibility of sending image data to the spool based on several factors such as decomposing rates of the decomposing engines, priority of tasks or jobs within the combined job or image complexity, which the latter two are similar to Appellant's invention in ¶ [0033]. The transfer of jobs to the buffer manager's storage devices and eventually to the printer, are determined based on the previous factors stated above while the delivery of the jobs to a certain tray is based on the job description. It should be clear that the Examiner's interpretation of the transfer order and delivery order yields results that are not the same nor are dependent on one another to figure out the determination of either the transfer or delivery order.

Despite the above observations, when reading the Office Action regarding the transfer order, the Examiner relies on another section in Pavlovic to disclose the transfer order or procedure while citing the background of the stream handling concept[5]. Appellant's own arguments on pages 9 and 10 show the Examiner's train of thought regarding this feature. Moreover, in the last filed Office Action on pages 12 and 13, the Examiner states that the job type or format of the combined jobs determines the transfer path to the buffer manager. In other words, based on the characteristics of the jobs and how fast the decomposers can decompress the images that are of a certain complexity, processed jobs will be sent to the buffer manager in a processed order for the jobs to be stored either at the common image pool or spool. Thus, in view of the above

[5] Id. at col. 10, ll. 2-42.

arguments, it should be clear as to the reasoning why the Examiner cited several passages within the Office Action.

In response to the Appellant's remarks on page 11 stating that the primary reference does not specifically disclose being able to process one job at a time, the Examiner would like to briefly state that specifically in Pavlovic, it does explain in this case that a Postscript file is processed sequentially, or one at a time, before another Postscript file 2[6]. The section states when two Postscript files are filed and only one Postscript processor is utilized, the files are processed sequentially. This section proves that the system can, in fact, process Postscript files one at a time.

In addition to the above argument, when viewing Pavlovic, the Examiner does not disagree that it is the intent of the system to accept different types of jobs representing various Page Description Languages (PDL). However, it is clear that a user can send one file or more than one file combined into a single job that are of the same or different formats, such as Postscript, since it is up to the user as to how many files are combined into one job and submitted to the printing system[7]. The Examiner stated that if only two jobs are introduced of the same PDL instead of 3 different PDLs as illustrated in the reference, the feature of outputting a 1st Postscript file will occur before the outputting of a 2nd Postscript file, as stated in column 8, ll. 54-65. In this section, the system discloses that Postscript file 1 is output before Postscript file 2 since only one decomposer of Postscript is available. The Examiner only took this small

[6] Id. at col. 8, ll. 61-64.
[7] Id. at col. 7, ll. 51-col. 8, ll. 13 and col. 10, ll. 15-32.

aspect of the invention and isolated this feature so that job re-arrangement is not utilized, and the execution of jobs does not depend on obtaining the jobs that are rearranged. Despite using only two jobs in the Office Action, if the system processes two or four jobs of the same format and there is only one decomposer of that format, the jobs still will be transferred to the buffer manager one at a time. Therefore, with the system able to process jobs of the same format one at a time and transfer these jobs to the buffer manager being performed, the Examiner believes that the feature of processing jobs without being rearranged is performed.

On page 12 the Appellant asserts that it is still inexplicable as to how Pavlovic "independently determines" each of the orders to "increase efficiency". In a brief answer, the system evaluates different characteristics of jobs or files and determines each processing order through different portions in the job description pertaining to the different jobs. Efficiency of the system operation is increased through jobs, either of the same or different formats, being processed as if they are apart of the same job. There are other aspects of this invention that increases efficiency, such as changing job transfer locations based on load conditions, but the Examiner only listed these few situations as examples of the overall system function of increasing output efficiency.

Regarding the assertion pertaining to claims 1, 15 and 19, when viewing paragraph [0016] of Appellant's specification, since the Examiner believes that the picking of a certain type of media is not the same as transferring a job to the buffer manager and a certain storage device or transferring this output job to an output tray, then it is clear that the different procedures regarding picking media, transferring a job

to different parts of the printing system and placing a job in an output tray are all distinct from one another.

Lastly, in response to the argument on page 15 that asserts that Pavlovic would cease advantage to the user if the Examiner's modification was actuated in the invention, the Examiner would like to briefly address this allegation. The Examiner's suggestion is a function of the invention with the user able to send one or more jobs to the system comprised of the same or different format. As cited earlier referring to column 8, the system may utilize a single decomposer for a language and only decompose one job at a time when two jobs of the same format is presented to a printing device. If two jobs of the same format are decomposed, the first job would be related to the first stream handle and the second job is related to the second stream handle, which, in this case, involves no job rearrangement[8]. Regardless of whether the user prints with stapling or not, the jobs are taken from the storage devices in the manner in which they are placed on either the spool or common image pool. Therefore, the Examiner still believes that the functions of the claim limitations are taught by the Pavlovic reference through both the explicit and implicit teachings of the reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

[8] Id. at col. 7, ll. 51-col. 8, ll. 64.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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